AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

Claims 1-65 (Canceled)

66. (Currently amended) A composition ~~comprising~~ of a plurality of particles ~~including~~ comprising:

(a) a core provided by a bioactive component;

(b) surfactant molecules having an HLB value of less than about 6.0 units, said surfactant molecules being associated with the bioactive component; and

(c) ~~and a cell recognition component,~~ a shell surrounding the association of the bioactive component and surfactant molecules, said shell comprising at least one biocompatible polymer, wherein at least one of said biocompatible polymers provides specific cellular or tissue uptake,

with the particles having an average diameter of less than about 50 nanometers as measured by atomic force microscopy following drying of the particles.

67. (Currently amended) The composition of claim 66 wherein the bioactive component comprises a macromolecule. ~~A composition comprising:~~

~~a plurality of particles comprising a surfactant having an HLB value of less than about 6.0 units associated with a bioactive component and either a polymer or a cell recognition component or a combination thereof, with the particles having an average diameter of less than about 50 nanometers as measured by atomic force microscopy of the particles following drying of the particles~~

68. (Previously presented) The composition of claim 66 wherein the bioactive component comprises a hydrophilic component.

69. (Previously presented) The composition of claim 66 wherein the bioactive component comprises a hydrophobic component.

70. (Currently amended) The composition of claim 67[[66]] wherein the ~~bioactive component~~ macromolecule is a member of the group consisting of peptides, proteins, and carbohydrates.

71. (Currently amended) The composition of claim 67[[66]] wherein the ~~bioactive component~~ macromolecule comprises a polynucleic acid, oligonucleotide, antisense molecule, [[~~poly~~]]peptide nucleic acid, or oligopeptide.

72. (Currently amended) The composition of claim 71 where the [[polynucleotide]] polynucleotideic acid is an RNA or DNA sequence of more than 1 nucleotide in either single chain, duplex or multiple chain form, or modified forms thereof.

73. (Currently amended) The composition of claim 67[[66]] wherein the ~~bioactive component~~ macromolecule comprises a member of the group consisting of antigens isolated from pathogens, viral antigens, fungal antigens, parasitic antigens, and inactivated pathogenic organisms.

74. (Currently amended) The composition of claim 66 wherein the bioactive component is a small molecule ~~or inorganic agent~~.

75. (Currently amended) The composition of claim 74[[66]] wherein the ~~bioactive component~~ small molecule is ~~cisplatin~~ a chemotherapeutic agent.

76. (Previously presented). The composition of claim 66 wherein the bioactive component is a detection agent.

77. (Previously presented). The composition of claim 76 wherein the detection agent is a fluorescent molecule.

78. (Currently amended) The composition of claim 66 wherein the bioactive component is ~~condensed~~ an inorganic agent.

79. (Currently amended) The composition of claim 67[[66]] wherein the ~~bioactive component~~ macromolecule is a member of the group consisting of aptamers, mini-chromosomes, steroids, adrenergic, adrenocortical steroid, adrenocortical suppressant, aldosterone antagonist, and anabolic agents; analeptic, analgesic, anesthetic, anorectic, anti-acne agents; anti-adrenergic, anti-allergic, anti-amebic, anti-anemic, and anti-anginal agents; anti-arthritic, anti-asthmatic, anti-atherosclerotic, antibacterial, and anticholinergic agents; anticoagulant, anticonvulsant, antidepressant, antidiabetic, and antidiarrheal agents; antidiuretic, anti-emetic, anti-epileptic, antifibrinolytic, and antifungal agent; antigens, antihemorrhagic, anti-inflammatory, antimicrobial, antimigraine, and antimiotic agents; antimycotic, antinauseant, antineoplastic, antineutropenic, and antiparasitic agents; antiproliferative, antipsychotic, antirheumatic, antiseborrheic, and antisecretory agents; antispasmodic, antihrombotic, anti-ulcerative, antiviral and appetite suppressant agents.

80. (Currently amended) The composition of claim 67[[66]] wherein the ~~bioactive component~~ macromolecule is a member of the group consisting of blood glucose regulator, bone resorption inhibitor, bronchodilator, cardiovascular, and cholinergic agents; fluorescent, free oxygen radical scavenger, gastrointestinal motility effector, glucocorticoid, and hair growth stimulant agent; hemostatic, histamine H_2 receptor antagonists; hormone; hypocholesterolemic, and hypoglycemic agents; hypolipidemic, hypotensive, and imaging agents, immunizing and

agonist agents; ~~metals, metal chelates,~~ mood regulators, mucolytic, mydriatic, nasal decongestant; neuromuscular blocking agents; neuroprotective, NMDA antagonist, non-hormonal sterol derivative, ~~peptide nucleic acids,~~ plasminogen activator, and platelet activating factor antagonist agent.

81. (Currently amended) The composition of claim 67[[66]] wherein the ~~bioactive component~~ macromolecule is a member of the group consisting of platelet aggregation inhibitor, ~~protein antibodies,~~ psychotropic, radioactive, scabicide, and sclerosing agents; sedative, sedative-hypnotic, selective adenosine A1 antagonist, serotonin antagonist, and serotonin inhibitor agent; serotonin receptor antagonist, steroid, thyroid hormone, thyroid hormone, thyroid inhibitor agent; thyromimetic, tranquilizer, amyotrophic lateral sclerosis, cerebral ischemia, Pagel's disease agent; unstable angina, vasoconstrictor, vasodilator, wound healing, xanthine oxidase inhibitor agent; and immunological agents.

82. (Previously presented) The composition of claim 66 wherein the bioactive component is a combination of two or more bioactive components.

83. (Currently amended) The composition of claim 66 wherein ~~the cell recognition component is~~ at least one biocompatible polymer of said shell comprises a ligand.

84. (Currently amended) The composition of claim 66 wherein ~~the cell recognition component~~ at least one biocompatible polymer of said shell comprises a peptide hormone, antibody, tenascin, hyaluronan, or polyvinylpyrrolidone~~, or a fragment thereof~~.

85. (Currently amended) The composition of claim 66 wherein ~~the cell recognition component~~ at least one biocompatible polymer of said shell comprises [[is]] a ligand that targets a receptor for ~~tenascin,~~ hyaluronan or polyvinylpyrrolidone, an antigen, a cell surface receptor involved in receptor mediated endocytosis, a growth factor receptor, a cell adhesion molecule, or an integrin.

86. (Currently amended) The composition of claim 66 wherein at least one biocompatible polymer of said shell comprises a ligand that targets a receptor for tenascin ~~the cell recognition component is a combination of two or more cell recognition components~~.

87. (Currently amended) The composition of claim 66[[67]] wherein the surfactant is a non-ionic surfactant.

88. (Currently amended) The composition of claim 66[[67]] wherein the surfactant has an HLB value of less than about 5.0 units.

89. (Currently amended) The composition of claim 66[[67]] wherein the surfactant has a critical micelle concentration of less than about [[10]] 200 micromolar.

90. (Currently amended) The composition of claim 66[[67]] wherein the surfactant is selected from the group consisting of cetyl alcohol, 2, 4, 7, 9-tetramethyl-5-decyn-4, 7-diol, molecules containing an acetylenic diol portion, and blends of 2, 4, 7, 9-tetramethyl-5-decyn-4, 7-diol.

91. (Currently amended) The composition of claim 66[[67]] wherein the surfactant is a combination of two or more surfactants.

92. (Currently amended) The composition of claim 66[[67]] further comprising a biocompatible oil or a combination of two or more biocompatible oils.

93. (Currently amended) The composition of claim 66[[67]] further comprising a water-miscible solvent or a combination of water-miscible solvents.

94. (Currently amended) The composition of claim 66[[67]], further comprising a cation chosen from the group consisting of Ni^{2+}, Mn^{2+}, Mg^{2+}, Ca^{2+}, Al^{3+}, Be^{2+}, Li^{+}, Ba^{2+}, and Gd^{3+}, and combinations thereof.

95. (Currently amended) The composition of claim 66[[67]] wherein [[the]] said at least one biocompatible polymer is an iontophoretic polymer.

96. (Canceled)

97. (Currently amended) The composition of claim 66[[67]] wherein [[the]] said at least one biocompatible polymer is a hydrophilic polymer that is capable of substantially coating the association of the bioactive component and the surfactant molecules.

98. (Currently amended) The composition of claim 66[[67]] wherein said at least one biocompatible [[the]] polymer is chosen from the group consisting of polyamides, polycarbonates, polyalkylenes, polyalkylene glycols, polyalkylene oxides, polyalkylene terepthalates, polyvinyl alcohols, polyvinyl ethers, polyvinyl esters, polyvinyl halides, polyvinylpyrrolidone, polyglycolides, polysiloxanes, polyurethanes and copolymers thereof, alkyl cellulose, hydroxyalkyl celluloses, cellulose ethers, cellulose esters, nitro celluloses, polymers of acrylic and methacrylic esters, methyl cellulose, ethyl cellulose, hydroxypropyl cellulose, hydroxy-propyl methyl cellulose, hydroxybutyl methyl cellulose, cellulose acetate, cellulose propionate, cellulose acetate butyrate, cellulose acetate phthalate, carboxylethyl cellulose, cellulose triacetate, and cellulose sulphate sodium salt.

99. (Currently amended) The composition of claim 66[[67]] wherein said at least one [[the]] biocompatible polymer is chosen from the group consisting of poly(methyl methacrylate), poly(ethylmethacrylate), poly(butylmethacrylate), poly(isobutylmethacrylate), poly(hexlmethacrylate), poly(isodecylmethacrylate), poly(lauryl methacrylate), poly(phenyl methacrylate), poly(methyl acrylate), poly(isopropyl acrylate), poly(isobutyl acrylate),

poly(octadecyl acrylate), polyethylene, polypropylene poly(ethylene glycol), poly(ethylene oxide), and poly(ethylene terephthalate).

100. (Currently amended) The composition of claim 66[[67]] wherein said at least one [[the]] biocompatible polymer is chosen from the group consisting of poly(vinyl alcohols), poly(vinyl acetate, poly vinyl chloride polystyrene, polyvinylpryrrolidone, polyhyaluronic acids, casein, gelatin, glutin, polyanhydrides, polyacrylic acid, alginate, chitosan, poly(methyl methacrylates), poly(ethyl methacrylates), poly(butylmethacrylate), poly(isobutylmethacrylate), poly(hexlmethacrylate), poly(isodecl methacrylate), poly(lauryl methacrylate), poly(phenyl methacrylate), poly(methyl acrylate), poly(isopropyl acrylate), poly(isobutyl acrylate), and poly(octadecl acrylate).

101. (Currently amended) The composition of claim 66[[67]] wherein said at least one ~~the hydrophilic~~ biocompatible polymer is a member of the group consisting of proteinaceous materials, peptides, and carbohydrates.

102. (Currently amended) The composition of claim 66[[67]] wherein [[the]] said at least one biocompatible polymer ~~is a combination of two or more polymers~~ has functional groups for chemical reaction on application of light, ultrasonic energy, radiation, a change in temperature, pH, osmolarity or solute or solvent concentration.

103. (Previously presented) A method of delivering a bioactive component to a target cell, the method comprising exposing a cell to the composition of claim 66 that binds to a targeted receptor.

104. (Previously presented) The method of claim 103 wherein the cell is a cancer cell or an antigen presenting cell.

105. (Currently amended) A method of delivering a bioactive component to a cell having caveolae, the method comprising exposing a cell to the composition of claim 66 that binds to a targeted receptor, wherein the composition is internalized via ~~passable through cellular~~ caveolae-mediated uptake for delivery of the bioactive component.

106. (Previously presented) The method of claim 105 wherein the cell is a cancer cell or an antigen presenting cell.

107. (Previously presented) The composition of claim 66, wherein the plurality of particles is associated with the cell.

108. (Previously presented) A method of transforming a cell, the method comprising exposing the cell to the composition of claim 66.

109. (Previously presented) A method of delivering a bioactive component across keratinized barrier epithelia to a cell, the method comprising introducing the composition of claim 66 at a position that is separated from the cell by a keratinized barrier epithelium, wherein at least a portion of the plurality of particles passes through the keratinized barrier epithelium to the cell.

110. (Canceled)

111. (Previously presented) The method of claim 109 wherein the composition of claim 66 is prepared as a medicament, and the medicament is administered to a patient.

112. (Previously presented) A medicament comprising the composition of claim 66.

113. (Previously presented) The medicament of claim 112 further comprising a form selected from the group consisting of granules, tablets, pellets, films, oral, intravenous, subcutaneous, intraperitoneal, intrathecal, intramuscular, inhalation, topical, transdermal, suppository, pessary,

intra urethral, intraportal, intraocular, transtympanic, intrahepatic, intra-arterial, intrathecal, transmucosal, coatings, buccal, and combinations thereof.

114. (Currently amended) A method of delivering a medicament to a patient, wherein the composition of claim 112 is administered to the patient by oral, intravenous, subcutaneous, intraperitoneal, intrathecal, intramuscular, inhalation, topical, transdermal, suppository, pessary, intra urethral, intraportal, intraocular, transtympanic, intrahepatic, intra-arterial, intrathecal, transmucosal, coatings, device, pulmonary, or buccal, or combinations thereof.

115. (Previously presented) A matrix for binding the particles of composition 66, the matrix comprising the particles and a binder.

116. (Currently amended) A method of ~~delivering a bioactive component to a cell having caveolae~~ forming a particle for caveolae-mediated uptake of a bioactive component into a targeted cell, the method comprising: associating the bioactive component with ~~an organic functional~~ biocompatible polymer providing specific cellular or tissue uptake ~~component in vitro to make an association of the bioactive component and the organic functional composition,~~ to form a particle measuring less than about 50 nanometers as measured by atomic force microscopy following drying of the particle, ~~wherein the association is passable through cellular caveolae~~ for delivery of the bioactive component by caveolae-mediated uptake ~~medical agent~~.

117. (Canceled)

118. (Currently amended) The method of claim 116 further comprising exposing the particle ~~association of the bioactive component and the organic functional component~~ to the cell.

119. (Currently amended) The method of claim 116 further comprising administering a medicament to a patient, the medicament comprising the association of the bioactive component and the ~~organic functional~~ biocompatible targeting component.

120-121. (Canceled)

122. (Currently amended) The method of claim 116[[120]] wherein the particle further comprises a surfactant having an HLB value of less than about 6.0 units.

123. (Previously presented) The method of claim 122 further comprising exposing the particle to the cell.

124. (Previously presented) The method of claim 116 wherein the bioactive component is a combination of bioactive components.

125. (Canceled)

126. (Currently amended) The method of claim 116 wherein the bioactive component comprises [[is]] a macromolecule ~~member of the group consisting of peptides, proteins, and carbohydrates~~.

127. (Currently amended) The method of claim 116 wherein ~~the bioactive component comprises~~ said biocompatible polymer forms a shell of said particle ~~a fragment of a nucleic acid that comprises a nucleic acid sequence~~.

128-132 (Canceled)

Please add new claims 133-134:

133. (New) A composition comprising a collection of pharmaceutically acceptable particles that comprise a bioactive component and a ligand comprising tenascin.

134. (New) A composition comprising a collection of pharmaceutically acceptable particles that comprise a bioactive component and a ligand that targets a receptor for tenascin.